



PATTERSON SERVICES, INC.

BOP Information Sheet*

TOWNSEND Type 81 BOP Double 7-1/16" 5K

Tubing

1" thru 4 1/2"

Drill Pipe

2 3/8" thru 5 1/2"

Heavy Weight

Drill Pipe

2 7/8" thru

6 5/8"

Drill Collars

2 7/8" thru 10"

Blow-Out

Preventers

Annular Type

2 9/16" 5M thru

29 1/2" 500 PSI

Hydraulic Ram

Type

Single and Double

3 1/16" 10M thru

21 3/4" 5M

Valves Manual &

Hydraulic

12" Ball Valves

2 1/16" 5M thru

4 1/16" 15M

1	BOP Serial #	P-
2	Type	Type 81" Double Ram Studded BOP 7-1/16" 5K
3	Manufacturer	Townsend
4	Height	20.500" / 0.521 m (520.700 mm)
5	Weight (Standard)	2,800 lbs. / 1,270.059 kg
6	Length (bonnets closed)	65.00" / 1.651 m (1,651.000 mm)
7	Length (bonnets opened)	65.00" / 1.651 m (1,651.000 mm)
8	Door bolt torque (API lube)	686 ft-lbs / 930 N'm
9	Door bolt torque (Moly Lube)	N/A
10	Door bolt (impact socket size)	1-13/16" / 46.038 mm
11	Door bolt (striking wrench size)	1-1/8" / 28.575 mm
12	Hydraulic operating pressure	1,500 PSI / 103.422 bar
13	Max hydraulic pressure	1,500 PSI / 103.422 bar
14	Open and close porting size	3/4" NPT
15	Open volume w/ standard bonnets	0.6 gal. / 2.271 liters (per set of rams)
16	Close volume w/ standard bonnets	0.73 gal. / 2.763 liters (per set of rams)
17	Ram Change rod open faced wrench size	N/A
18	(2) 7-1/16" 5K Studded- Bolt Diameter X Length	1-3/8" x 7-1/2" / 34.925 mm x 190.500 mm
19	Quantity	12 per flg.
20	Bolt Torque	1,281 ft.lbs. / 1,737 N'm
21	(4) 2-1/16" 5K Studded Outlet-Bolt Diameter X Length	7/8" x 4-5/8" / 22.225 mm x 117.475 mm
22	Quantity	8 per flg.
23	Bolt Torque	319 ft.lbs. / 432.5 N'm
24	Flange Gasket	R/RX-46
25	Outlet Gasket	R/RX-24

* Drawings and information contained herein are for general purposes and are for reference only. Dimensions may vary according to Manufacturer, Year Manufactured, Model or Type.

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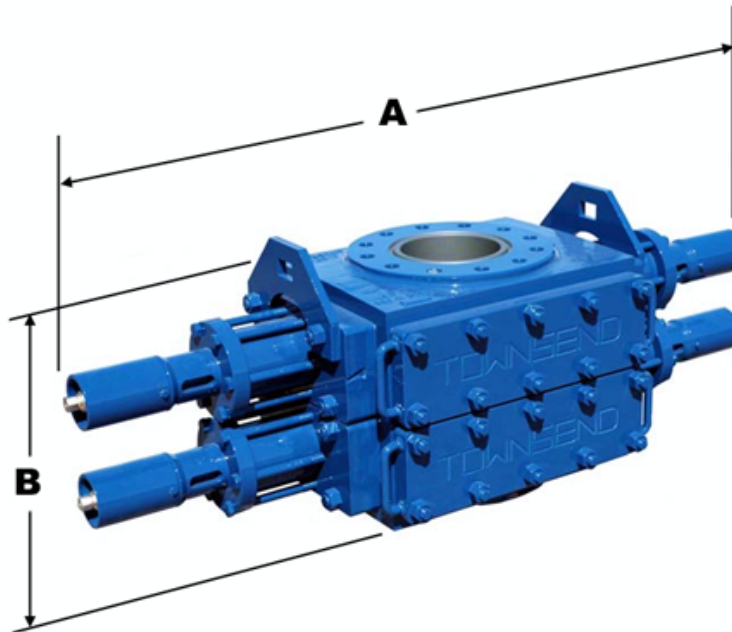
PATTERSON SERVICES, INC.

SPECIFICATIONS

DIMENSIONAL DATA

TOWNSEND Type 81 BOP Double 7-1/16" 5K

Size	Pressure rating (PSI)	Vertical Bore (inches)
7 - 1/16"	5,000	7 - 1/16"



The capital letters in the following designations refer to the BOP

A-1 Length - bonnets closed, locking screws locked

A-2 Length - bonnets opened, locking screws unlocked .

B Height - Studded (less studs)

English Units (inches)

A-1	A-2	B		English Units (lb) Approx. Weight (lb)
65.000	65.000		20.500	2,800.000

Metric Units (m)

A-1	A-2	B		Metric Units (kg) Approx. Weight (kg)
1.651	1.651		0.521	1,270.059

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